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ABSTRACT

This publication identifies, discusses, and lists areas for further research for five ethical issues related to health services: 1) the right to health care; 2) death and euthanasia; 3) human experimentation; 4) genetic engineering; and, 5) abortion. Following a discussion of each issue is a selected annotated bibliography covering the years 1967 through 1969, with some articles from 1970. The periodicals surveyed for this study include the medical journals indexed in the "Index Medicus" as well as the most important theological and philosophical journals, prominent journals of opinion, and general interest magazines. Some books and government reports are also cited. The report is a response to the heightened professional and public interest in ethical issues which has resulted in a large body of literature. Articles were selected on the bases of fair representation of viewpoints and quality, that is, articles judged as clarifying and advancing the ethical discussions. (Author/DJB)

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ETHICAL ISSUES IN HEALTH SERVICES:

A Report and Annotated Bibliography

ATIONAL CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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ETHICAL ISSUES IN HEALTH SERVICES

A Report and Annotated Bibliography

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NATIONAL CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Public Health Service
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ETHICAL ISSUES IN HEALTH SERVICES: A REPORT AND ANNOTATED BIBLIOGRAPHY

The number of articles written in recent years on the ethical issues connected with health services is quite large. Many of these articles, however, even those written in professional journals, are superficial in content and do not clarify or advance the discussion. In view of the vast size of the literature and the dubious merit of much of it, the bibliography presented here is highly selective. Quality alone, however, was not the sole criterion for inclusion. An attempt was also made to give a fair sampling of all viewpoints on each issue. In a public discussion all sides must be listened to if a consensus is to emerge.

In the annotations I have tried to present what is the original contribution of the author, or else to give what seemed to be his main emphasis. Obviously one cannot always summarize in three or four lines the ideas and reasoning of a lengthy article, especially on matters so complex as ethical judgments. There may be some distortion or even misunderstanding of an author's position. If the annotations suggest enough about the content of an article to guide the reader either to read the article or to avoid it as irrelevant to his purpose, they will have succeeded.

There are several reasons for the heightened professional and public interest in ethical issues. One is the advance made in recent years in biomedical science and technology. The spectacular innovations have brought with them new and perplexing problems for moral decisions. The prolongation of life in the senile, the survival of defective neonates, organ transplantation, population explosion—all of these necessitate new applications of ethical principles and even a rethinking of the principles themselves.

A second reason for interest in ethical issues is the contemporary upheaval in society and its institutions. Medical institutions cannot be exempt from the general questioning of our social standards and values. The civil rights movement and the war on poverty, for instance, have confronted us with the question of social justice in the availability and delivery of health care. The "right to health care" has become a cry like the "right to a living wage" of a previous era.

Socialization is a phenomenon of contemporary life. In the health services it is marked by the growing institutionalization of medical care and by the shift in financing and control from the public to the private sector. This socialization brings ethical and moral issues that were previously private and

personal into the realm of public policy. Decisions about health care, even for middle-class Americans, will more and more take on a collective, political character. And this is a third reason for the widespread interest and concern about ethical issues.

The importance of an ethical issue is not necessarily reflected in the number of articles written about it. Some questions more readily catch the public or professional interest. Some, like abortion, involve strong ecclesiastical sentiment and political consequences. Another, like the right to health care, or, more correctly, of access to health care, is still too vague, has had too brief a career to have had much written about it at length or in depth. It is still more an aspiration than a legal or social actuality. The articles cited in the bibliography on this issue, with one or two exceptions, do no more than affirm this right without treating it to any extent. Yet the articles are listed in order to document the extent to which the right to health care is seen to be in a certain sense the pervasive and overriding ethical issue in health services.

The right to health care is of fundamental importance because, although it is an individualistic term, it immediately involves social questions. As soon as one begins to examine what it means and what it entails, one must consider the social morality of health care. If everyone has a right to equality of access to health care and resources are limited, then the whole question of the allocation of resources and a host of other questions, all involving value-judgments, must be raised. What proportion should go to research, what to service to those presently in need? Would money spent on housing, nutritional programs, health education, preventive and environmental medicine pay off more than money spent on direct medical care? A healthy environment, moreover, has psychological and cultural, as well as physical components. And so the right to health care ultimately involves considerations about the well-being, in its broadest sense, not only of the individual but also of society as a whole.

What I am suggesting here is that ethical issues in health care lead ultimately to ultimate questions about the definition of man and the definition of society, the good for the individual and the common good (part of the perduring problem is that, although these terms are strict correlatives, we seem obliged to think about them as if they were independent entities). The ultimate questions, of course, cannot be answered. Indeed, for a mentality geared to problem-solving and verifying hypotheses they are meaningless or boring. Even to raise them tends to be considered in bad taste. But the moralist must raise them.

He must raise them because to do so increases the likelihood that decisions will be more conscious, more rational, more responsible. To raise

ultimate, unanswerable questions, gives us a perspective on the simpler questions we are confident we can answer. It helps to uncover the hidden assumptions, to explicitate the implicit premises. If, for example, our economic system has stimulated the need and demand for so many goods and gadgets that we may be buried under the junk, raising ultimate questions may make us aware that another option exists besides population-growth zero. Instead of fewer babies we might opt for fewer bottles, beer cans or automobiles. The projected "cost" of retarded children might be reckoned differently if the value of a human life is defined as something more than the sum of its future discounted earnings.

Whether or not raising ultimate questions ultimately affects our practical decisions it should at least help to raise the tone of public dialogue by enabling parties which have different value-systems to understand better why they disagree with one another even when confronted with the same facts. This alone will be an ethical gain in our pluralistic society.

This report covers the literature published between January, 1967 and December, 1969. Some articles published in 1970 have been included, but no systematic coverage of the 1970 literature has been made.

The periodicals surveyed for this study include the medical journals indexed in the *Index Medicus* (Washington, Department of Health, Education, and Welfare, Public Health Service, National Institutes of Health, National Library of Medicine, Vols. 8 – 10 [1967 – 1969]) as well as the most important theological and philosophical journals, prominent journals of opinion, and general-interest magazines.

The ethical issues connected with human tissue transplantation are not the subject of a separate heading in this bibliography. This subject has already been dealt with in: Hall, Jacquelyn, H., M.S. and David D. Swenson, M.D., *Psychological and Social Aspects of Human Tissue Transplantation. Annotated Bibliography*. Washington, 1968. U.S. Department of Health, Education, and Welfare, Public Health Service, Health Services and Mental Health Administration (Publication No. 1838). *Supplement No. 1*, 1969. (Public Health Service Publication No. 1838-1.)

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1. THE RIGHT TO HEALTH CARE

The unalienable rights of life and liberty have been affirmed as ideals of American society since the nation's founding. Much of our history can be looked at as the effort to make these ideals a reality. Essential to the securing of these rights were other rights enumerated in the Constitution, such as the right to private property. The Homestead Act of 1862 was one legislative embodiment of the conviction that the rights to life and liberty could be secured by means of the family farm with its economic independence and security.

The growth of industry and commerce gradually made it clear that private property in land could not ensure the rights to life and liberty of the majority. And so the right to a living wage and the right to a job opportunity were recognized as necessary. These rights were slowly defined, expanded, fleshed out, in legislation concerned with minimum wages, union organization, collective bargaining, equal opportunity. The Full Employment Act of 1946 recognized the responsibility of the Federal government to pursue economic policies which would enable each citizen to exercise his right to a livelihood.

Urbanization brought with it the problem of housing. As early as the 1890s Congress investigated the problem. The right to decent housing, though far from effectively implemented, has been an avowed national policy since the end of World War II.

The right to health care is in about the same stage today as was the right to a living wage a generation ago. With the growth of medical science and the wealth of our resources the faith that all men are created equal and endowed by their Creator with certain unalienable rights can no longer tolerate such inequities in the availability of health care that one's enjoyment of life and liberty is significantly diminished.

Areas for further study. The problem areas are not primarily ethical but political, social and legal: how implement the right to health care while maintaining other values; how allocate resources; how achieve a consensus on priorities and policies; how educate for personal exercise of the right to health care.

1. Bazelon, David L., *Hearings Before the Sub-Committee on Government Research of the Committee on Government Operations of the United States Senate, Ninetieth Congress, Second Session, On S.J. Res. 145,* (Washington, 1968, U.S. Government Printing Office.), pp. 274-82. The impact of medical care on the lives of our citizens is so great that all Americans, including the poor, must have adequate protection. Today Americans increasingly regard medical care as a right rather than a privilege.

2. Bazelon, David L., "The Right to Treatment: the Court's Role", *Hospital and Community Psychiatry,* 20 (1969) 129-135. When important rights, such as the right to treatment, are at stake, the courts must become involved even in judging medical matters. If mental hospitals hold patients involuntarily they must provide adequate treatment since the only justification for holding the person without a trial and other constitutional safeguards is that such detention is for the good of the person.

3. Breslow, Lester, "The Urgency of Social Action for Health", *American Journal of Public Health,* 60 (1970) 10-17. Medical care is increasingly recognized as a right.

4. Breuer, Lyman A., III, *"De Humanitate", American Journal of Surgery,* 118 (1969) 133-40. Health care is now considered a basic human right, not a commodity which can be purchased only if one has the means.

5. Cassell, Eric J., "In Sickness and in Health," *Commentary,* 49 (1970), 59-56. The original demand was that medical care be made a basic right of the individual, and hence the responsibility of society. Now we pretty much accept it as that.

6. Cohen, Wilbur J., "Major Domestic Challenges: National Priorities", *The Humanist,* 29 (1969) 17-19. Priority no 4. (after discrimination, poverty and education) is health care. All these problems relate to the quality of American life. They are concerned with the roots of our national purpose: the dignity of man, the liberation of the human spirit, the release of human potential. In this sense, they represent moral imperatives for our country. They promote the moral and ethical values on which this country is founded.

7. Fuchs, Victor R., "What Kind of a System for Health Care", *Bulletin of the New York Academy of Medicine,* 45 (1969) 281-292. One of the problems of a free market system in health services is the feeling that it is unjust for medical care to depend upon income.

8. Garfield, Sidney, "The Delivery of Medical Care", *Scientific American,* 222 (1970) 15-23. The concept of medical care as a right is an excellent principle that both the public and the medical world have now accepted. Yet the words mean very little since we have no system capable of delivering medical care as a right.

9. Kuhn, James, "Financing Medical Care for the Aged", *Christianity and Crisis,* 25 (1965) 39-41. The chief issue: should doctors keep their present freedom to set standards, or are they prepared to meet the demands and requirements of the public for adequate health care?

10. Lee, Philip R., "Health and Well-Being", *Annals of the American Academy of Political and Social Science,* 373 (1967) 193-207. Concerns for problems of health and disease cannot be divorced from such factors as economic status, housing, nutrition, education, social class and custom, sanitation, geography, transportation, recreation, crime and delinquency, employment, racial background and a host of others. President Johnson in his message to the Congress on "Advancing the Nation's Health" (1965), stated that the health goal of this nation is "good health for every citizen to the limits of this country's capacity to provide it." There is abundance of evidence of a new national determination that good health is the birthright of every American.

11. McCarthy, Thomas, "National CHSR&D: An Opportunity for Partnership", *Journal of Medical Education,* 44 (1969) 337-43. The Department of Health, Education and Welfare has placed the highest priority on development of comprehensive health service projects to serve the disadvantaged and to assist in providing a uniformly high level of service to all citizens.

12. Millis, John S., "Is Private Practice Dead?" *California Medicine,* 109 (1968) 499-503. The public looks at health care now as it once did at food, clothing and shelter. If health is a right, the duty should be not on the individual physician, but on the institution. Institutions need not end the doctor's freedom, no more than universities have ended the professor's.

13. Richmond, Julius B., and Howard L. Weinberger, "Health Services for Children and Youth", *American Journal of Public Health,* 60 (1970), Supplement) 23-67. Access to health services is now accepted as a right and not a privilege. Ethically and economically the nation cannot afford a two-level system of care, one for the poor, the other for the affluent.

14. Rogatz, Peter, "Health Services in a Democracy", *Bulletin of the New York Academy of Medicine,* 45 (1969) 421-36. Our goal must be a single standard of health care for all.

15. Stewart, William H.,"Medical Education and the Community" *Perspectives in Biology and Medicine,* 10 (1966-67) 462-70. We are at a turning point in American Medicine. The best of health for all has become our objective.

16. Stewart, William H., in: Lee, Philip R., "Health and Well-Being", *Annals of the American Academy of Political and Social Science,* 373 (1967) 204-205. The meaning of the right to health care can be spelled out as follows: 1. A place to go when ill; to know where it is; to have the assurance of skilled and compassionate care; 2. Diseases which can be prevented should be for all; 3. The senile, the insane and the retarded must be given humanitarian care; 4. A healthy environment; 5. Those in health careers must be assured of an excellent education, efficiency in the use of their skills and opportunities to exercise them; 6. There must be assurance of permanence in bio-medical research, and therefore of the Federal commitment to the same; 7. We must share our health- knowledge with the world.

17. Todd, Malcolm C., "A Time to Lead", *Arizona Medicine,* 24 (1968), 319-23. Like it or not, doctors are now living in a time when public responsibility is replacing our traditional individual responsibility for health care.

18. Watts, Malcolm S. M., ed., "Scope and Responsibility of Medicine: Contributions to a Forum", *California Medicine,* 108 (1968) 509-514. The medical profession must find a way for every person to have a personal physician. The profession is the natural leader in community health care and must exercise leadership to adapt the mainstream practice of medicine to meet the needs of all the community. One level of care must be accessible to all.

2. DEATH AND EUTHANASIA

There is extensive, if not universal agreement in the medical literature that clinical death has taken place when irreversible coma is accompanied by cessation of spontaneous breathing and of spontaneous heart-beat. The actual practice of doctors varies tremendously. Basic life-supportive measures are usually maintained but beyond a certain point heroic measures like renal dialysis might not be employed.

Moralists agree that the definition of death is a medical, not a moral or religious question. The legal problems connected with a re-definition of death are vast and complicated (inheritance, taxes, lawsuits for malpractice, etc.). The practice of the courts will depend, to a great extent, upon public acceptance of the new norms.

The literature on euthanasia is complicated by a confusion in terminology. There is an amazing ignorance among doctors and others who favor what they term euthanasia about the stance of religious groups and ethicists. Attempts have been made to get around the terminological confusion by coining the word "anti-dysthanasia", or by distinguishing between positive and negative euthanasia, the former being a positive, direct, transitive action the sole intent and immediate result of which is the death of the patient, the latter a cessation or non-employment of one or more therapeutic measures.

Areas for further study. Is there a consensus among doctors as to the need for re-defining death? What is the actual practice of doctors in the treatment of the dying? Is it a general practice to continue life-supportive measures such as transfusions and intra-venous feeding to the very end? Is the reason for such practices the ethical conviction that it is the doctor's duty to struggle to the end against death? Or is it for fear of legal reprisals for an omission which allows death to occur? Is there a mutual misinterpretation on the part of the doctor and the family of the patient as to what each thinks the other party wants?

In view of the spiritual and material burden on the relatives, the expenditures of the hospitals in personnel, equipment and space, and the observable prolongation of discomfort, if not acute pain in the dying patient, study and research should be undertaken which might help in the formulation of rational and compassionate guidelines for physicians and institutions on the treatment of the dying, and for the purposes of medical education.

1. Ad Hoc Committee of the Harvard Medical School, "A Definition of Irreversible Coma," *Journal of the American Medical Association,* 205 (1968), 337-340. Except in cases of hypothermia or drug intoxication, irreversible coma should be accepted as a new criterion for death. It is characterized by unreceptivity and unresponsivity, no movements or breathing, no reflexes. A flat electroencephalogram is confirmatory evidence. It is for the physician to decide that death has occurred. This should be done before turning off the respirator. If this definition of death is accepted by the medical community no statutory change in the law should be necessary.

2. Barnard, Christian, "Human Heart Transplantation", *Canadian Medical Association Journal,* 100 (1969), 92-104. For several years prior to the first heart transplant neurological death was a signal to terminate further treatment.

3. Beecher, Henry K., "Ethical Problems Created by the Hopelessly Unconscious Patient", *New England Journal of Medicine,* 278 (1968), 1425-30. There comes a time when it is no longer appropriate to continue extraordinary means of support for the hopelessly unconscious patient. Society can ill afford to discard their tissues and organs. To salvage them requires the prior concurrence of those involved, the agreement of society and the approval of the law.

4. Beecher, Henry K., "After the 'Definition of irreversible coma' ", *New England Journal of Medicine,* 281 (1969), 1070-71. The definition of death put forward by the Harvard *Ad Hoc* Committee has been widely accepted. Lawyers have been less enthusiastic. Their disagreements have produced an unduly hesitant and tentative response in some hospital administrators. Supporting evidence for the Committee's report has developed. A retrospective study of 100 cases confirmed that general devastation of the brain was nearly complete with no possibility of recovery of mental function. In 3000 cases in which EEG was isoelectric for 24 hours there was not a single recovery. Once the decision has been made to terminate treatment, waiting for the heart to stop by inexorable asphyxia only lessens the chances for successful transplants.

5. Boulding, Kenneth. "The Concept of Need for Health Services", *Milbank Memorial Fund Quarterly,* XLIV (1966), 202-225. Should the medical profession devote a relatively large proportion of its resources, as it does now, in keeping miserable and senile elderly people alive, when their capital value, even to themselves, has become negative? Men have a

reasonable aversion to playing God and introducing a non-random element in what has hitherto been sanctified as random. Substituting non-random for random processes always produces acute moral crisis.

6. Crosbie, Stanley, M.D., "Abortion and Euthanasia", *Rocky Mountain Medical Journal,* 66 (1969), 41-46. Six degrees of euthanasia may be distinguished: 1) Giving what may be lethal doses of pain-killing drugs to terminal patients; 2) Withholding treatment except for sedatives and analgesics in hopeless cases (transfusions, intravenous feeding); most physicians do not hesitate to do this; 3) Giving terminal patients the means of suicide. This is a crime in the U.S.; 4) Giving lethal doses of medicine to a patient on his request; 5) Furnishing patients who have a serious or distressing physical or mental illness with the means of suicide, or giving them a lethal dose; 6) Taking a person's life because he is of no value and a burden to society. There is inconsistency in our laws in allowing abortion but prohibiting euthanasia.

7. Cunningham, Michael F., "To Live and Die Humanly", *Religious Humanism,* 3 (1969), 97-100. To live humanly is to create meaning from one's environment, to make choices, and to be in control of one's mind and body. Every person has the right to choose death when this process becomes irreparably dysfunctional.

8. Curran, William J., "The Legal Definition of Death", *American Journal of Public Health,* 58 (1968), 1965-66. The law provides no legal justification for turning off a respirator on a hopelessly unconscious person with irreversible, widespread brain damage.

9. Downing, A. B., *Euthanasia and the right to die.* London, 1969, Peter Owen. A symposium of both sides of the euthanasia debate. Cf. entries under separate contributors.

10. Drinan, Robert F., "Should there be a legal right to die?" *American Ecclesiastical Review,* 159 (1968) 277-86. History and present state of the euthanasia movement. Practical difficulties against euthanasia: getting free consent from one in pain; anxiety and guilt of those who helped a patient "decide" to die. Suggestion of political strategy for those opposed to the new assaults on the right to life.

11. Fletcher, Joseph, *Moral Responsibility.* Philadelphia, 1967, Westminister Press. There is extensive agreement between Catholic and Protestant moralists on anti-dysthanasia.

12. Gelfand, Michael, *Philosophy and Ethics of Medicine.* Edinburgh, 1968, Livingstone. Euthanasia is inconsistent with the basic principles of medicine.

13. Giertz, G. B. in: Wolstenholme, G. E. W. and Maeve O'Connor, *Ethics in Medical Progress,* (London, 1966, J. & A. Churchill). To say that irreversible loss of consciousness constitutes death is an attempt to establish agreement between a pressing medical situation and the prevailing legislation. It defines life as "mental functions". At this point we have left the biological and medical frame of reference.

14. Halley, M. and William F. Harvey, "Medical vs. Legal Definitions of Death", *Journal of the American Medical Association,* 204 (1968), 423ff. Law and medicine should cooperate on a precise definition, identical in both disciplines. Suggested: The irreversible cessation of *all* the following: total cerebral function, spontaneous function of the respiratory system, spontaneous function of the circulatory system.

15. Jonas, Hans, "Philosophical Reflections on Human Experimentation," *Daedalus,* 98 (1969), 219-247. It is one thing to stop the extraordinary means of preserving life and let the person die. It is another to do violence to his body before the process of dying is completed. For the first purpose we need not know the exact moment of death. All we have to know is that the coma is irreversible. But for the latter, since we do not know, only the maximum definition of death will do.

16. Kamisar, Yale, "Some non-religious objections", in: Downing ed., *The Right to Die,* 85-133. The cumbersome machinery of the proposed British law would turn the sick-bed into a bureau; any proposal is faced with the dilemma of inadequate protection or over-elaborate machinery. Can a pain-wracked person make a choice? The mistakes and lack of expertise of many doctors. Today many ways of killing pain in the dying are available. There is little evidence of a desire to die, even in suffering cancer patients. For those who do, suicide is available. The euthanasian's rejection of the "thin-wedge" argument is belied by their implying that it *is* a thin wedge, since they give no ethico-moral-legal wall of separation between voluntary and involuntary euthanasia.

17. Kilbrandon, Lord, "General Discussion" in: Wolstenholme and O'Connor, *Ethics in Medical Progress.* (London, 1966, J. & A. Churchill). We will never have an Act of Parliament which will define death: that is a medical question.

18. Mead, Margaret, "The Right to Die," *Nursing Outlook*, 16 (1968), 20-21. We must develop an ethic in which the old can choose to die.

19. Montefiore, H. S., "Ethical Problems of Geriatrics", *Gerontologica Clinica*, 11 (1969) 65-74. Ethical decisions need expert knowledge and insight into particular situations. The national problem in geriatrics is that of allocation of resources. The family problem is that of the relations of older persons with other family members. The medical problem is the right to live. Some principles: death is not always a disaster; grief is unavoidable; man is made in the image of God; a man's life has a natural term. Finally, each case is unique.

20. Pius XII, "Prolonging Life," *Observatore Romano* (1957), 393-98. Reaffirmation of the distinction, classical in Catholic moral theology, between ordinary and extraordinary means of preserving life. The definition of the latter is a function of circumstances, e.g., the financial burden alone can be reasonable ground for discontinuing the maintenance of vital functions.

21. Ramsey, Paul, "On Updating Death," in: Cutler, ed., *Updating Life and Death* (Boston, 1969, Beacon Press), 31-54. The definition of death should not be changed for the purpose of using organs for others, but so that the persons who have died need not have "life"-sustaining measures inflicted upon their unburied corpses needlessly and at great expense to their families. If the heart is functioning only because of the machine, while the brain and other system are not functioning, then the patient is dead.

22. Rutstein, David D., "The Ethical Design of Human Experiments." *Daedalus*, 98 (1969), 523-41. Until recently if the heart were still beating treatment would continue. It is remarkable that this major ethical change has occurred right before our eyes, and been widely accepted with little public discussion of its significance. Will our senile population be next?

23. Todd, Malcolm C., "A Time to Lead," *Arizona Medicine*, 25 (1969), 812. Proposes the formation of a highly professional state commission of many disciplines to evaluate the impact of organ and tissue transplants, etc. Someone must make a decision on the definition of life and death and this can only be the physician.

24. Walker, A. Earl, "The Death of a Brain", *Johns Hopkins Medical Journal*, 124 (1969), 190-201. It is axiomatic that the rights of the moribund

patient must be respected to the end. But it is not desirable that extraordinary resuscitative procedures be indefinitely carried out on a corpse because a spark of life exists in a tissue or organ. At the present time it is highly unlikely that the concept of cerebral death based upon one or two criteria would be acceptable even to the most highly cultured people in the world. Only if somatic death can be shown to follow cerebral death as the day the night will the concern be eliminated. Even though the neurosurgeon has methods for stating with certainity the functional condition of the brain, he should not assume responsibility for the decision that the person is dead unless the other so-called vital organs have failed. Until society looks upon cerebral death the way it now looks at cardiac death the final decision should be shared by several physicians with the informed advice of legal, religious and sociological colleagues.

25. Welford, A. T., "Mental Integrity and the Nature of Life", *Medical Journal of Australia,* 57 (1970), 1135-38. The problem in the care of the senile is basically one of manpower, not money. Life may be defined as functional integrity, and it may be argued that death has occurred with the extensive, diffuse brain damage of senility. One difficulty with this position is: How certain is the prediction of non-recovery; can psychological tests be devised that would measure when the continuity of individual experience has been lost? A second difficulty is in the maternal instinct and guilt feelings which result if we don't do everything possible to prolong life in the senile or defective neonate. Extensive public education might eliminate these feelings. There is little evidence that the infanticide practiced in ancient Greece caused severe distress.
Man is the image of God in his mental and emotional integrity. When these are lost or lacking the surviving organism no longer bears that image. Medical practitioners, psychologists and theologians must join in an attempt to clarify the problems of defining life and death and providing informed leadership for public debate.

26. Wilson, Jerry Bryan, "Coup de Grace and the Complexity of Decision," *Christian Century,* 84 (1967), 82-83. We should distinguish between anti-dysthanasia and euthanasia. The first would be, e.g., administering a potentially lethal dose of a drug to kill extreme pain, stopping treatment which prolongs a patient's dying, withdrawing treatment altogether. Big changes in our present laws are not needed.

27. Williams, Glanville, "Euthanasia Legislation: Rejoinder to the Non-religious Objections," in: Downing, ed., *Euthanasia and the Right to*

Die. (London, 1969, Peter Owen), pp. 134-147. It is cruel to the patient's family to allow lingering pain. The *liberty* of the individual to die and of the doctor to assist should not be restricted since there is no social good to justify such restriction.

28. World Medical Assembly, *Statement on Death* (in "The Declaration of Sydney", *Medical Journal of Australia,* 1968, 364). The determination of death should remain the legal responsibility of the physician. The point at which the death of organs or cells takes place is not so important as the certainty that the process has become irreversible no matter what techniques of resuscitation may be employed. If organ transplantation is involved the decision that death exists should be made by two or more physicians not involved in the transplant.

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3. HUMAN EXPERIMENTATION

Medical progress depends upon experimentation with human subjects. The ethical problem is to maintain the paramount welfare of the individual while continually exploring the therapeutic value of new techniques. Federal Agencies, such as the Food and Drug Administration and the Public Health Service have been concerned with this ethical problem for many years. In 1966 the PHS initiated a policy requiring that grantee institutions undertake a major share of the responsibility for ensuring the welfare of human subjects in clinical investigations.

The fundamental ethical principle involved in human experimentation is the inviolability of the human person. With some exceptions which indicate hesitancy about this principle (Cf. in the bibliography Nos. 6, 19, and 22) there is general agreement in the literature surveyed. The principle is unequivocally embodied in the PHS Policy on Clinical Investigations Using Human Subjects. But on concrete applications of this principle, for instance, on the use of captive groups for experimentation, there is no consensus. The disagreement on issues like this seems to indicate the wisdom of the PHS policy of institutional responsibility on the local level. Many variables such as the morale of a prison population, the precise subject being investigated, the expertise and integrity of the investigator, can make a decisive difference in the matter of a truly voluntary informed consent. No detailed manual of procedures or code of instructions can deal with some of these dimensions.

Areas for further study. Informed consent is necessary not only in clinical investigation but also in individual therapy. With the growth of rationalized delivery systems the obtaining of informed consent will become more of an institutional responsibility. To assist hospitals in developing procedures that are efficient as well as ethical, studies could be made of existing policies and procedures. Informed consent seems likely to grow in importance as a component of the quality of care in health-service institutions.

1. American Orthopsychiatric Association, "Code of Ethics on Human Experimentation," *American Journal of Orthopsychiatry*, 38 (1968), 589-90; Adapted from the Helsinki Declaration of the World Medical Assembly. In all experimentation the freedom of the human individual must be safeguarded. Subjects must be fully informed as to the risks involved and then give their free consent. It should be in writing. The subject must be guaranteed the right to guard his personal integrity and withdraw from the experiment whenever he chooses.

2. Beecher, Henry K., "Medical Research and the Individual," in: Edward Shils, ed., *Life or Death: Ethics and Options* (Seattle, 1968, University of Washington Press), pp. 114-51. The difficulties of getting "informed consent" due to pressure put on the subject to give consent. The end of research, medical progress, never justifies the means, deprivation of an individual of certain basic rights. Dying patients and captive groups are unacceptable subjects for experimentation. Editors of medical journals should make a policy against publishing questionable research. The law is too harsh in forbidding any experimentation on the part of doctors: the adequate practice of medicine requires constant experimentation, even in ordinary practice. One solution offered (*Duke University Law Journal*, 1960) is "liability without fault," i.e., the patient, if injured, must be made whole or compensated, but the experimenter, acting for the common good, is not jeopardized. Even though the public recognizes the need for research, there is no case law or legislation to protect the subject, the researcher or the hospital. Something analogous to workmen's compensation should be introduced.

3. Beecher, Henry K., "Scarce Resources and Medical Advancement," *Daedalus*, 98 (1969) 275-313. The use of children for experiments; the cost of hemodialysis compared with that of care of mentally ill and the cost formerly of caring for TB patients. Failure to use the organs of the irreversibly comatose to save lives is unethical.

4. Blumgart, Herman, "The Medical Framework for Viewing the Problem of Human Experimentation," *Daedalus*, 98 (1969) pp. 248-74. The doctor-patient relationship is a therapeutic alliance. It is threatened by specialization; the doctor must be certain that the expected benefit outweighs the risk *to his patient*. The investigator-subject relationship is a scientific alliance. There must be informed consent, serious advantages must be hoped for, with good chance of success. It is not agreed whether prisoners or one's students are apt subjects for experimentation. The

danger to an individual's welfare cannot be condoned except in special and unusual circumstances.

5. Burger, Warren E., "The Law and Medical Advances," *Annals of Internal Medicine,* 67 (1967, Supplement), 15-18. The Law's question is: Did the subject give an informed, intelligent, voluntary consent? If investigators use none but legally competent adults, make full disclosure, their problems will largely disappear. The use of infant children, mental incompetents, soldiers, is indefensible in any rational social order. We cherish many values about scientific advances. Science must function within the framework of these values.

6. Calabresi, Guido, "Reflections on Medical Experimentation in Humans," *Daedalus,* 98 (1969), 387-405. We use autos although we know this costs 50,000 lives per annum, but because we did not *choose actively* this part of social system, the responsibility is sufficiently diffuse for use to live with. In medicine no adequate control system has arisen by itself and so we have to *choose* a system that affords an adequate balance between present and future lives and is still sufficiently indirect and self-enforcing as to avoid clear choices of individuals to be sacrificed for the common good. There should be a compensation fund to victims of experiments. This would stimulate in each medical center greater analysis of possible benefits and risks entailed. We want decisions that reflect societal choices and control when victims are taken for the common good. On the other hand we do not want society to lose its role of protector of individual lives. These desires conflict, but both are essential to a decent society. Consent is useful in preserving the ideal that society hardly ever condones the sacrifice of an individual against his will; but it cannot serve as a general control system determining when the future good requires the taking of present lives.

7. Curran, William J., "Governmental Regulation of the Use of Human Subjects in Medical Research: The Approach of Two Federal Agencies," *Daedalus,* 98 (1969), 542-594. History of the FDA Act of 1962; exhaustive analysis and critique of the revised (1966) FDA regulations on patient consent.

8. Curran, William J., and Henry K. Beecher, "Experimentation in Children", *Journal of the American Medical Association,* 210 (1969), 77-83. Therapeutic research on a minor is legal if informed consent is obtained from the parent or guardian. Non-therapeutic research may include minors as subjects if they are least fourteen years old, are intelligent and mature enough to give informed consent. Parental

consent is required in addition if there are discernible risks. Donation of an organ is legal if the donor is at least fourteen, intelligent and mature enough to give informed consent and if the parent consents. Donations should be restricted to relatives and close friends. Children under fourteen years of age may participate in clinical investigations which are not for their direct benefit if the investigations are sound, promise new important knowledge for mankind and there is no discernible risk.

9. Epstein, Lynn Chaikin, and Louis Lasagna, "Obtaining Informed Consent", *Archives of Internal Medicine,* 123 (1969), 682-688. Prospective subjects were asked to take doses of aspirin under a fictitious name. Three different information sheets were given out. Comprehension and consent to volunteering were in inverse proportion to the length of the information sheet. Information for obtaining informed consent should be brief and to the point.

10. Fischer, C. T., "Ethical Issues in the Use of Human Subjects", *American Psychologist,* 23 (1968), 532-33. Students should be used in an experiment only if it is part of the learning process.

11. Fletcher, John, "Human Experimentation in the Consent Situation", *Law and Contemporary Problems,* 32 (1967), 620-649. Consent is the critical moral and legal area. A person can be used as a thing whenever his conscious capacity to respond to the truth is denied him. Prisoners should rarely be used as experimental subjects. Peer approval should be required of an investigator if he wants dispensation from the consent requirement. Payment should not replace informed consent. The consent situation is so variable that rigid codes will not do. Published codes inform the public of the profession's ethics. What remains is adequate demonstration that the problems of consent are being explored as attentively as other social responsibilities of science. Concrete suggestions for making the decision-making atmosphere one of the widest possible responsibility and self-possession.

12. Freund, Paul, "Legal Framework for Human Experimentation," *Daedalus,* 98 (1969), 314-24. The model of a voluntary association may be the best way to understand the legal question of investigator and experimental patients. Freedom and consent must be safeguarded; due care in administering the procedure, soundness of design, hope of producing significant results with reasonable hazards.

13. Grisez, Germain G., "Rational Ethics Says 'No' ", *Commonweal,* 86 (1967), 122-25. One can experiment with things because one thing can

replace another. A person is irreplaceable. Human life is not subject to use and disposability.

14. Gustafson, James M., "Toward Maturity in Decision-Making," *Christian Century*, 85 (1968), 894-98. Competence in moral questions comes only through competence in the subject-matter at hand and precision in thinking about it.

15. Jaffe, Louis L., "Law as a System of Control," *Daedalus*, 98 (1969), 406-426. There should be a committee system for reviewing projected experiments. Consent is a function of each situation. To say that certain classes of subjects (e.g. prisoners) should never be used makes consent an absolute value irrespective of the interest consent is designed to protect, viz., the integrity and dignity of the subject and his health. "Informed consent" is sometimes too rigidly interpreted as against the social good and relative lack of risk.

16. Jonas, Hans, "Philosophical Reflections on Human Experimentation," *Daedalus*, 98 (1969), pp. 219-147. Society is an abstraction, subject to our definition of it. The individual is the primary concrete, prior to all definition, and his good is more or less known. If society has a right, then no consent of the individual is needed. The fact that today we insist on consent shows the ambiguity of that public right. Society cannot afford inequity or a single miscarriage of justice because these undermine the moral basis on which it exists. Nor can it afford the atrophy of compassion or the effort to alleviate suffering, one form of which is the effort to conquer disease.

17. Ladimer, Irving, and Roger W. Newman, *Clinical Investigation in Medicine: Legal, Ethical and Moral Aspects.* Boston, 1963. Boston University Law-Medicine Institute. Comprehensive treatment of all aspects of the question: texts of all codes issued by professional bodies, including regulations of the FDA and the AMA resolution against the use of prisoners in experiments.

18. Landau, Richard L., "Civil Rights and the Clinical Investigator", *Perspectives in Biology and Medicine*, 10 (1967), 137-40. The Public Health Service has begun to regulate professional conduct in universities, private research institutes and hospitals. Safeguarding the health and rights of the patient belongs ultimately to the physician. If responsibility is shared by peer groups, the patient may suffer because the investigator can unload his responsibility on the committee.

19. Lasagna, Louis, "Special Subjects in Human Experimentation," *Daedalus*, 98 (1969), 449-462. Discussion of arguments for and against the use of prisoners, the dying, students, children, mentally ill and defective. In general no absolute rules should be laid down. Experimentation is necessary for medical progress, the risks cannot be evenly distributed. The basic care must be not to destroy the moral fabric in our zeal for the physical fabric of society. Some gains are not worth the price. There must be a sober weighing of costs and benefits, not moral cliches (like "informed consent"). Concern for the individual is no nobler than desire to aid the many.

20. Leake, Chauncy D., "Technical Triumphs and Moral Muddles," *Annals of Internal Medicine*, 67 (1967, Supplement), 43-49. There are ten serious ethical questions in biomedicine, six of which are new: contraception, miscegenation, abortion, euthanasia, transplants, cost of hemodialysis, genetic control, artificial insemination, pesticides, drugs. In general science must place its knowledge before the public.

21. Martin, Daniel, et. al., "Human Subjects in Clinical Research–A Report of Three Studies", *Journal of the American Medical Association*, 279 (1968), 1426-31. A group who volunteered for experimentation understood the nature of the experiment and its risk no better than those who refused to volunteer, even though they had continued to receive detailed information throughout the program. Very few of either the volunteers or non-volunteers cited the risk involved as a consideration in their decision. Influences of environment and peer group seem to have more influence on the decision to volunteer than the explanation of the experiment itself.
Altruism is a strong motive, especially among "low" socio-economic groups, women, and those responsible only for themselves. Those of "more privileged status" seem less apt to express sentiments of altruism or to act upon them. The present discussion about the use of human subjects is taking place mainly among members of this reluctant group. The decision about this major enterprise will in all likelihood be made by members of this same group. There is need for a wider public discussion of the issue so that decisions on the use of human subjects may reflect the sentiments of the total community.

22. McDermott, Walsh, "Opening Comments," *Annals of Internal Medicine*, 67 (1967), 39-42. In the military draft we take away the liberty and endanger the lives of some individuals for the common good. The core of

the ethical issue in clinical investigation is similar: to secure the rights of society an arbitrary judgment must be made against an individual. The Helsinki Declaration and the FDA regulations, if followed to the letter, would produce the curious situation in which the only stated public interest is that of the individual. The conflict of individual and society is irreconcilable. We must trust the clinical investigator.

23. Mead, Margaret, "Research with Human Beings: an Anthropological Model", *Daedalus,* 98 (1969), 361-386. The problem is: how much power should a specialist have and how can trust in his essential benevolence be preserved. Deceit or experiments which take advantage of another's helpless status are a violation of trust. Parson's suggestion (cf. entry No. 28) that subjects be treated as collaborators is very important.

24. Myers, Michael Justin, "Informed Consent in Medical Malpractice," *California Law Review,* 55 (1967), 139ff. Criticism of existing standards. Proposal: Physician must make a full disclosure of all known material risks in a proposed operation or course of treatment, or must prove the reasonableness of any lesser disclosure.

25. *National Commission on Health Science and Society.* Hearings before the Sub-Committee on Government Operations, United States Senate, Ninetieth Congress, Second Session, Washington, 1968. Government Printing Office. Testimony by scientists, moralists and others on the ethical, political and social issues connected with bio-medical innovations.

26. Norman, John, "Physicians and Surgeons: Informed Consent", *Oklahoma Law Review,* 20 (1967), 214-19. Proposes the rule: "whether a reasonable medical man in the community would have made such a disclosure under similar circumstances". Limitations of both a "negligence" and a "battery" theory for a case. Suggests allowing a combination of these theories in arguing a case: "it would more surely ensure the patient's right to be informed without holding a hatchet over the doctor's head."

27. Pappworth, M. N., "Ethical Issues in Experimental Medicine," in: Cutler, Donald, ed., *Updating Life and Death.* Questionable experiments are now going on with children, the mentally ill and defectives. A possible future good is not comparable to a present certain harm

28. Parsons, Talcott, "Research and the Professional Complex", *Daedalus* 98 (1969), 325-360. Ethics is essentially social responsibility. Due to the

peculiar nature of health service, accountability must be exercised within the profession. Human research is like university research: the professional complex is the relation between the professionals and lay participants. The layman must be brought into some kind of membership status. Mutual trust is all-important. The competence gap puts stress on the integrity of the professional members of the association. Neither informed consent nor privacy are absolutes. A rigid insistence on "rights" is a declaration of distrust of the professional element. Inclusion of the lay element is the primary mechanism by which the tendency to withdraw can be counteracted.

29. Ratnoff, Oscar D. and Marian, "Ethical Responsibilities in Clinical Investigations," *Perspectives in Biology and Medicine,* 11 (1967-68), 82-90. Scientists themselves must keep their house in order. Investigators must seek help from colleagues in deciding the morality of specific investigations. They must be prepared to accept the censure of scientific societies and journals if they transgress the bounds of ethical propriety.

30. Rutstein, David, "The Ethical Design of Human Experiments", *Daedalus,* 98 (1969), pp. 523-41. There must be some constraints. We cannot, e.g., get a vaccine for hepatitis because no animal is susceptible to it. Controlled studies, though appearing unethical, are in the long run less harmful and more helpful. A description of present methods of drug-testing and suggestions for improvements.

31. Stason, E. Blythe, "The Role of the Law in Medical Problems", *Law and Contemporary Problems,* 32 (1967), 561-596. A comprehensive review of current trends in the law with regard to chief medical questions (artificial insemination, abortion, use of computers, etc.) In several areas legal obstacles to medical progress are being cleared, but the trend will seem to doctors to be the opposite in the area of informed consent.

32. Stumpf, Samuel E., "Momentum and Morality in Medicine", *Annals of Internal Medicine,* 67 (1967, Supplement), pp. 9-14. The dilemma is how to achieve two goals, the expansion of medical knowledge and the protection of the dignity and security of the individual. The charge of unethical conduct in experimentation has come from within the profession, indicating a pervasive problem. Consent cannot make right what is intrinsically wrong. Informed consent is difficult to obtain because the outcome cannot be known. The principle of "risk must be proportionate to hoped-for-good" ignores the fact that the benefit is always limited but the risk can be total; consent is often obtained through a kind of duress. Despite these limitations, consent is the best approach to

the ethical problem: it preserves the status of the subject as a person. A fair test is that of reciprocity: would the investigator allow himself or his family to undergo the experiment?

33. Sullivan, Philip R., "Morals and Medical Research", *Christianity and Crisis,* 27 (1967), 151-55. Foregoing the accepted best cure in order to have a control group for an experiment presents an ethical problem. Suggested principle: a study that jeopardizes the life or health of a number of patients is automatically suspect.

34. Wolfensberger, Wolf, "Ethical Issues in Research with Human Subjects", *Science,* 155 (1967), 47-51. In the opinion of many scientists and members of the lay public the widespread use of certain procedures in experiments, peer approval and the use of volunteers only, are all not enough to guarantee proper ethical standards. The author then proposes, as a basis for discussion, a model statement of procedures.

35. Wolstenholme, G. E. W., and Maeve O'Connor, eds., *Ethics in Medical Progress.* London, 1966. J. & A. Churchill. A symposium devoted to the problems raised by organ transplantation and in connection with this, the ethical issues in human experimentation.

36. (Anonymous), "The Use of Prisoners for Drug Trials in Alabama", *Journal of the Medical Association of Alabama,* 39 (1969), 396-398+. The drug testing program is almost essential and should be continued for the benefit of the prisoners (they need the money, the contributions made to their welfare fund, and the moral rehabilitation which their volunteering affords), and for the benefit of society in general. However, as presently conducted the program does not provide adequate safeguards for the health of the prisoners and leaves something to be desired in the quality of the results attained.

4. GENETIC ENGINEERING

Like organ-transplantation the subject of genetic engineering arouses much public interest. It opens up exciting and controversial possibilities which naturally lend themselves to debate over ultimate human values. But a careful reading of the literature shows that most scientists believe that the qualitative control of the genetic structure of man is very far in the future.

There are some areas at present in which eugenics raises ethical questions. The first is the idea of a sperm bank to preserve the seed of outstanding men for future impregnations. The ethical issue here is a purely private personal one since within the foreseeable future the practice could hardly become widespread enough to make any difference in the genetic composition of a population. As with the presently practiced artificial insemination (AID) the only issue that needs clarification is the legal one of the relation of an AID child to its mother's husband with respect to inheritance, etc. Premarital and prenatal genetic counseling are presently being practiced. Since it is now possible to ascertain several genetic defects by amniocentesis, prospective parents of a defective offspring have the option of abortion.

Whether medical advances are tampering in a significant way with natural selection is a sharply disputed question (Cf. Nos. 1 and 17 in the bibliography).

Because of the geometric progression in scientific knowledge, the time for public policy decisions may arrive much sooner than expected. Even scientists who see the practice of genetic engineering as still far in the future urge nevertheless that public education and public discussion on the possibilities be promoted. There are political, social and ethical issued involved in family planning, especially among the poor and minority groups. Moreover, the accelerating institutionalization of health care will bring more and more into the political realm such questions as, for example, the withholding of certain medical treatments from defective neonates.

Areas for further study. A sociological and economic analysis of genetic counseling centers; cost-benefit analysis of public support for these centers.

1. Augenstine, Leroy, *Come, Let Us Play God.* (New York, 1969, Harper and Row.) We have three alternatives: 1. Go on with present medical practice and within 5 to 10 generations 1 out of 10 children born will be seriously defective; 2. Give no medical care to some defective children, perform preventive abortion or sterilization; 3. Embark on a course of genetic manipulation.

2. Birch, L. Charles, "Scientific Dilemma," *Christianity and Crisis,* 27 (1967) 304-07. The new power of control which genetics brings to man is paralleled by a growth in a sense of meaninglessness. Some way must be found to bring science, purpose and love together.

3. Carter, C. O., "Genetic Counselling," *Medical Clinics of North America,* 53 (1969), 991-999. A report on ten years of experience in genetic counselling. If parents were advised that the risk of serious malformation or disease in the child was one in ten or greater, two-thirds of the parents decided not to take the risk. If the chances were less than one in ten, three-fourths decided to take the risk of having a child.

4. Crowe, James F., "The Quality of People: Human Evolutionary Changes," *Bioscience,* 16 (1966) 863-67. Statistical proof that the genetic consequence of the successful treatment of diseases caused by rare recessive genes is slight. The opposite is true in the case of rare dominant genes: here genetic counselling can help. Genetic manipulation must not be left to individual decisions, e.g., in choice of sex of offspring. The great difficulty is agreement on goals, whether the means are morally appropriate, and the extent to which we dare trust mankind to plan even short-time changes.

5. Curran, Charles E., "Moral Theology and Genetics", *Cross Currents,* 20 (1970), 64-82. In approaching moral issues, theology must keep in mind: 1) man's historicity; values change with time; 2) the recent era of exaggerated individualism still colors moral judgments; 3) man's domination over the earth and himself. Scientists must keep in mind: 1) Man's sinfulness and propensity to use power for evil; 2) Science and the human are not synonymous: because we can do something does not mean we should do it; 3) Man's dignity is not equivalent to usefulness.

6. Day, Alice Taylor, "Population Control and Personal Freedom": are They Compatible? *The Humanist,* 28 (1968) 7-10. Family-planning today aims at family well-being, which may not be compatible with collective

well-being. Proposal: look for positive ways of inducing families to have fewer children by research on what kinds of satisfaction can be offered for those now supplied by having children. Attractive alternatives should be found to marriage and child-bearing.

7. Dobzhansky, Theodosius, "Evolution: Implications for Religion", *Christian Century,* 84 (1967) 936-41. We have a grave responsibility for directing the future course of evolution. There is general agreement as to the goals we should aim at, but decisions must be made. Giving up hope of controlling the direction of evolution may be suicidal. This, the greatest challenge ever put to human thought and culture, is a religious challenge.

8. Fackre, Gabriel, "Ethical Guidelines for the Control of Life," *Christianity and Crisis,* 29 (1969), 68-82. Christian principles for decision making: *Responsibility,* i.e., man is to shape his own future; *futurity,* the struggle for the *eschaton* of peace and justice and freedom; *Realism,* the sin in man. To mechanize man's capacity for choice is a violation of humanity. But whatever will enlarge man's freedom is ethical.

9. Hamilton, Michael, "New Life for Old: Genetic Decisions", *Christian Century,* 86 (1969), 741-44. Man's God-given dominion over the natural world includes his body. Positive eugenics is ethical if it enhances health and man's unique qualities of intelligence and freedom. Anything else is wrong. The production of para-human beings is not theologically objectionable *a priori.* Experiment with human material *in vitro* are allowable in the early stages because it serves science and medicine.

10. Hertz, Karl, "What Man Can Make of Man", *Christian Century,* 84 (1967), 807-10. Biologists alone are not competent to determine the optimal human genotype. When one moves from knowledge to practice, nonscientific questions are involved. There is danger of mechanistic and behavioristic views of man dominating in bio-engineering. Man's glory has been his diversity. Reminder of the use in the recent past of a dubious biology to justify exclusive immigration laws.

11. Hirschhorn, Kurt, "On Re-doing Man," *Commonweal,* 88 (1968), 257-61. Positive eugenics would be bad for the genetic health of the race. Negative eugenics is good only for individual families. To forbid on a wide scale the reproduction of individuals with defective genes would prevent the passing on the many favorable genes and would interfere with selective evolution which can function to improve the population within a

changing environment only by selecting from a gene pool containing enormous variability. Cloning would produce many homogeneous people with the same genetic complement and would lessen the adaptability of the population. What methods are ethical and feasible? Each must be judged on its own merits. Primary consideration must be given to individual human rights. Neither positive nor negative eugenics can ever significantly improve the gene pool and simultaneously allow for adequate evolutionary improvement of the race.

12. Hotchkiss, Roland D., "Portents for a Genetic Engineering", *Journal of Heredity,* 56 (1965), 197-202. The social problems that genetic engineering will raise will dawn on us piecemeal like problems of pollution and pesticides. The public needs to be informed.

13. Huisingh, Donald, "Should Man Control His Genetic Future?" *Zygon: Journal of Religion and Science,* 4 (1969), 188-99. Positive eugenics is dangerous: a large number of genetically similar people could all succumb to a new strain of microorganism. Positive eugenics supposes that we could agree on what qualities to select for, then quantify and select these qualities, and that genetics is the most important factor in determining than an individual have or develop the desired traits. But man has been on earth for at least 40,000 years without much change in his skeletal anatomy. His progress seems due, therefore, not to genetic improvement but to the advent of cultural transmission. Much more important than genetic manipulation is equal opportunity coupled with freedom of the individual.

14. Ingle, Dwight J., "Ethics of Genetic Intervention", *Medical Opinion and Review,* 3 (Sept., 1967) 54-61. At present and in the foreseeable future genetic intervention should be voluntary. Man lacks the wisdom and knowledge to undertake more than simple programs of genetic counselling. The genetic bases of great diseases and of incompetence are among the causes of poverty, misery, hopelessness. Man determines his future whether he likes it or not. Perhaps cautious steps toward negative genetics and even the increased use of artificial insemination can now be taken.

15. Lederberg, Joshua, Testimony before House Appropriations Sub-committee, (*Washington Post,* 18 July, 1970.) Prenatal diagnosis is the most forthright attack on genetic disease. It is possible now for only a few diseases. Genetic vaccines are further in the future. Greatest peril is that the government will take over individual decisions on reproductive

matters. Freedom of all to reproduce and the consequent cost to society are a small price to pay to protect the principle of private decision.

16. Mayr, Ernst, "Biological Man and the Year 2000", in: Daniel Bell, ed., *Toward the Year 2000,* (Boston, 1968, Houghton, Mifflin.) 200-04. Something must be done about the fact that people with lower intelligence reproduce more than those with higher intelligence. Reproductive advantage is replacing survival advantage as far as natural selection is concerned. Two conditions are necessary before beginning a program of genetic improvement. First, re-examine the role of the individual in society, exclude typological thinking: we are concerned only with individuals and their genetic potential. Secondly, we need research on the nature of genetic contribution to human traits; determine what makes a genotype "valuable". Once we have exhausted improvement by nurture we must think about positive eugenics. Man must ask himself does he want laissez-faire or to be master of his fate.

17. Medawar, P. B. "The Genetic Impact of Medicine", *Annals of Internal Medicine,* 67 (1967, Supplement) 28-31. Medical advances will not lead to genetic deterioration. Medicine keeps alive people with *specific* genetic disadvantages. There is no evidence that these people have general disadvantages. Most concepts of positive eugenics are out-of-date by the standards of the modern stock-breeder. The two time-scales, of medical advance and genetic deterioration, are so disparate as to be incommensurable: new medical solutions will be found long before our present regimen can create an insupportable problem, e.g., direct gene repair, some method of gametic solution, identification of the disability in the fetus.

18. Moore, G. E., "Biological Ethics: The Fantastic Future", *California Medicine,* 109 (1968) 449-98. Description of coming genetic manipulation. Suggestion for a small Presidential commission, composed only of physical and social scientists, to clarify policy on those innovations which may alter or threaten mankind.

19. Nadler, Henry L., "Pre-natal Detection of Genetic Defects", *Journal of Pediatrics,* 74 (1969), 132-141. A number of cytogenetic and biochemical disorders are capable of detection *in utero* at the present time. Until considerable more experience is gained with these techniques, however, the procedures should be considered experimental in nature.

20. Neel, James V., "Thoughts on the Future of Human Genetics", *Medical Clinics of North America,* 53 (1969), 1001-1011. Some of the potential applications of genetic knowledge raise troublesome issues whose clarification cannot be left solely to the scientist, e.g., making genetic copies of a person.
Everywhere today we see the consequences of precipitious action with inadequate understanding. Our ecosystem is strained to the limit by the consequences of human action. It would require an intellectual arrogance uncommon even in man to think that after these few years of human genetics as a discipline, we are ready to tinker with our most precious possession, our germ plasm. Much more is to be gained in the immediate future in terms of human potential through the manipulation of the environment to ensure a better realization of the genetic potential in each of us, than in the manipulation of the genotype. Here is a joint challenge for geneticist and social scientist.

21. Nevin, Normal, "Genetics and Preventive Medicine", *The Royal Society of Health Journal,* 89 (1969), 218-285. Genetic disease and congenital malformation are assuming relatively increasing importance in the population. A variety of measures is at present available that will control and/or reduce the amount of ill-health due to genetic factors. Genetic counselling is the most important contribution that geneticists can render to the care of individual families.

22. "Protecting Man from Man", *Science News,* 95 (1969), 31-33. A report on a symposium held by American Association for the Advancement of Science. Suggestion for a slow-down in genetic research. Sinsheimer: "The new eugenics would permit in principle the conversion of all the unfit to the highest genetic potential"; Skolnikoff: "Man's value system will be drastically affected by the new biology."

23. Ramsey, Paul, "Moral and Religious Implications of Genetic Control", in: Roslansky, John D., *Genetics and the Future of Man.* Amsterdam, North-Holland Publishing Co., 1966. The Christian knows no such absolutely imperative end that would justify any means. Christian morality connects sex and personal love and therefore finds unacceptable such schemes for positive eugenics as a sperm-bank from superior persons.

24. Riga, Peter J., "Modern Science and the Ethical Dimension", *Catholic World,* 209 (1969) 213-17. Genetic engineering is the most serious ethical question that can be asked today. Abuses of science in the past make us uneasy. An ethics of pure science must be coupled with an ethics of its use. It is the scientist who must make the synthesis.

25. Schipperges, Heinrich, "Utopias of Modern Medicine", *Medical Opinion and Review*, 3 (1967) 128-37. A relatively few facts and data established by genetic scientists provide no substantial basis for designing a plan for a new universe. Natural science alone cannot solve human problems.

26. Shinn, Roger, "Genetic Decisions: A Case Study in Ethical Method", *Soundings*, 52 (1969) 299-310. A caution that genetic manipulation may either enhance or threaten freedom.

27. Stern, Curt, "Genes and People", *Perspectives in Biology and Medicine*, 10 (1966-67) 500-23. Summary of the research which shows that genes are an important factor in intelligence. Whether the IQ difference between Black and White populations is genetically caused is not known. Plea for further studies despite the danger of misusing the results.

28. Smith, Harmon L., "Morals and Medicine: Periphery to Center", *Christianity and Crisis*, 27 (1967) 207-8. *Homo Sapiens* is not a finished organism. He is in flux. Will the changes be accidental or intentional? We cannot be victimized by naturalistic determinism. Problems are not insoluble: the basic premise underlying scientific and medical research is that beneath the immediate conundrum there is a coherent and rational whole.

29. Sonneborn, T. M., "Implications of the New Genetics for Biology and Man", *American Institute of Biological Sciences Bulletin*, 13 (1963) 22-26. Our present knowledge of bacteria and viruses gives no secure basis for concluding that directive control of their genetic constitutions is in prospect. There is no immediate prospect for the control of human heredity and evolution.

30. Theilecke, Helmut, "Ethische Frage der modernen Medizin", *Langenbecks Archiv fuer klinische Chirurgie*, 321 (1968) 1-34. Man remains a sinner, tempted to be false to his human nature, e.g., through gene-manipulation to breed himself into something different. All ethical questions lead to one: what is man? The ultimate question, What is man, cannot be answered by science.

31. Vaux, Kenneth, "Cyborg, R. U. Human? Ethical Issues in Rebuilding Man", *Religion in Life*, 39 (1970) 187-92. There are two types of ethical problems, those dealing with man's self-image (his pride, *hybris*); and those dealing with his inhumanity (money which should now be spent on the poor is used to save a few lives at great cost.)

5. ABORTION

Up until very recently the laws of the several states have prohibited abortion except when necessary for the mother's health. The mother's health has come to be interpreted as including mental health. R. E. Hall estimates that 40% of hospital abortions performed at present are for psychiatric indications. ("Abortion in American Hospitals", *American Journal of Public Health*, 57 (1967), p. 1935.)

Following the recommendation of the American Bar Association, several states have legalized abortion for reasons of rape, incest, defective fetus or mental and emotional well-being of the mother. Subsequent to these changes, the American Medical Association endorsed the position that abortion should legally be made a matter for the mother and physician to decide.

Ethical arguments for legalizing abortion upon request of the parent are that the law is unenforceable and therefore a bad law, that illegal abortions are a significant health hazard, that whatever deterrent effect the law exercises is effective against only the poor, that financial and psychological burden of an unwanted child should not be imposed on a mother, her family and society.

A change in the religious opposition to abortion has occurred insofar as some Catholic ethicists would allow abortion for reasonable cause in the earliest weeks of pregnancy. Jewish and Protestant moralists do not consider that the question whether an individual human being is present at a certain stage in the womb should be the sole determinant of the morality of an abortion. They do not, however, allow that an abortion may be performed for purely socio-economic reasons or as a routine back-stop for contraceptive failure.

Areas for further study. The ethical values involved in the question of abortion are pertinent to other matters of public policy regarding the quantitative and qualitative control of population and the beginning and ending of human life. At present there seems to be an impasse in the public dialogue. But it is imperative for the national well-being that rational discourse be promoted among doctors, lawyers, moralists and social scientists.

The first thing to be done is to gather the data, medical and sociological. How many maternal deaths result from abortions? How are the new laws permitting abortions working out? What has been the impact of these laws on attitudes toward abortion, e.g., among doctors?

The legal and ethical questions must also be studied. Can a consensus be found for drawing the line as to where human life begins? Is the decision to abort to be recognized as a purely private matter? What is the relation between abortion and euthanasia? Is abortion to be included under a woman's right to health care?

1. Augenstine, Leroy, "It's Later Than We Think", *Ecumenist,* 7 (1969), 41-43. Our present method of dealing with change in the abortion laws will be a paradigm for our future handling of genetic problems. We are seriously mishandling the issues. A panel consisting of a doctor, lawyer, clergyman, and three elected members of the public should handle decisions in each community.

2. Augenstine, Leroy, "Birth Defects: the Ethical Problem," *The Humanist,* 28 (1958), 18-20. Fetal inspection of monkeys is now possible: the fetus can be removed and replaced. Our new biological knowledge is a big bomb with a short fuse. We must address ourselves to the moral issues.

3. Ayd, Frank J., Jr., "Liberal Abortion Laws: a Psychiatrist's View", *American Ecclesiastical Review,* 158 (1968), 73-91. Analysis of the statistics indicates that psychiatric reasons alleged for abortions are mostly socio-economic ones. Proposal that a National Institute of Health collect the facts on illegal abortions before the laws are changed.

4. Brown, Brendan, "The Crime of Abortion", *Vital Speeches,* 36 (1970), 549-553. An unfavorable view of change in abortion laws based on the Anglo-American legal tradition and a Natural Law jurisprudence.

5. Buss, Martin J., "The Beginning of Life as an Ethical Problem", *Journal of Religion,* 47 (1967), 244-55. A review of attitudes toward abortion from antiquity, and its present legal status in most countries. The question of the beginning of life must be answered from faith, i.e., a personal apprehension of deity mediated by Scripture and reason (the latter is defined as the best knowledge available at the moment). Man is a self, a reflective being, made so by culture and language. A body does not, of itself, make a man. A suggested criterion of human life: the presence of brain waves (which occurs, according to the author, in the seventh month of pregnancy. Cf. no. 22.) A refutation of some of the arguments against abortion.

6. Callahan, Daniel, "The Sanctity of Life", in: Cutler, Donald, ed., *The Religious Situation:* 1969 (Boston, 1969. Beacon Press.), 276-296, pp. 181-223. An attempt to find some ethical principles which might win a consensus in our pluralistic society. The scientific data are, up to a point, ambiguous enough to provide some margin of flexibility as to where to draw the line in determining the beginning and the end of human life. Our rules should be consistent. A method of using data to solve the abortion problem which is very different from the method used to solve the

problem of sustaining moribund life could suggest that one or the other, or both, were arbitrary.

7. Carroll, Charles, "Liberalized Abortion: A Precedent-shattering Precedent", *Illinois Medical Journal,* 135, (1969), 214-218. If an individual human life is to be defined by its capacity for independent existence, we must deny the newly-born, the disabled accident victim and war veteran, the retarded, the mentally ill, and the senile any claim to membership in the human family, for they must be cared for and helped by others.

8. Giertz, G. B., "Ethical Problems in Medical Procedures in Sweden", in: Wolstenholme, G. E. W., and Maeve O'Connor, *Ethics in Medical Progress* (London, 1966. J. & A. Churchill). In Sweden there is no public consensus on moral standards except that of the worth of a human being. This concept, however, cannot be justified rationally. It is obvious that many people, the imbecile, the incurable mental defective, criminals and the like, are of no positive value to the community and often to no individual either. The idea of unconditional human dignity, implicit in the inviolateness of human life, is based on the belief that every human life, even the most wretched, has a meaning. Without this belief the respect for the value of the human being, and hence democracy itself, is in danger. The problem of abortion is: when does life begin to have human value? Of euthanasia: when does life cease to have human value?

9. Goldman, Martin J., "Abortion: Jewish Law and the Law of the Land," *Illinois Medical Journal,* 135 (1969), 93-95. In Jewish law killing a fetus without good reason is a crime but not murder. The life and mental health of the mother take precedence over the fetus. In general, each case in Jewish law is weighed on its own merits. The author personally recommends eliminating laws which make abortion a criminal offense.

10. Green, Ronald, "Abortion and Promise-Keeping", *Christianity and Crisis,* 27 (1967), 109-113. The general principle of the moderately liberal position is that there exists a *prima facie* right on the part of the fetus which yields to other considerations, e.g., the health of the mother. A better moral principle would be: Coitus implies a promise to bear the child in case of conception. The promise is to the future child (this by-passes the question of the present humanity of the fetus.) "Promises cease to bind when their fulfillment becomes impossible", This way of stating the moral principle involved puts the responsibility upon the

mother. Society's role should be limited to furnishing counselling to aid her decision-making, provision for the child, etc.

11. Hardin, Garrett, "The History and Future of Birth Control", *Perspectives in Biology and Medicine,* 10 (1966), 1-18. No birth-control method is fool-proof. There are still about 250,000 unwanted pregnancies annually. Ethically, not all lives are of equal value: there is a real conflict between the value of the mother (and to a lesser extent, of her family) and that of a 10 mm. embryo. The uniqueness of each life is no argument against abortion since the expected potential of each aborted child is exactly that of the average child born: the chances of an aborted Beethoven are the same as of an aborted Hitler.

12. Jakobovitz, Immanuel, *Jewish Medical Ethics.* New York, 1959, Philosophical Library. Historical survey. Jewish ethics permits abortion to save the mother's life.

13. Lederberg, Joshua, "A Geneticist looks at Contraception and Abortion", *Annals of Internal Medicine,* 67 (1967, Supplement), 25-27. The fetus is by no measurable criterion nearer to being a human being than the ape or chick. An operationally useful point of divergence of the developing organism would be approximately the first year of life, when the human infant continues his intellectual development, proceeds to the acquisition of language, and then participates in a meaningful, inter-action with his mother and the rest of society. At this point only does he enter into the cultural tradition that has been the special attribute of man, by which he is set apart from the rest of the animal kingdom.

14. Levine, Reuben R., "Judaism and Some Modern Medical Problems", *Journal of the Medical Society of New Jersey,* 65 (1968), 633-39. Man is the measure of all things, not because he is man, but because he is the nearest we can come to God. Judaism does not supply absolute answers but a posture which will aid situational solutions. Life begins when fetal movement can be discerned: if it is viable, its destruction would be taking a human life.

15. McCormick, Richard A., "Conference without Consensus", *America,* 117 (1967), 320-22. A report on the Washington Conference on Abortion sponsored by the Harvard Divinity School. The social scientists present insisted that rape, incest and fetal deformity are not the big problem in the U.S. Abortion is proposed rather as a backstop for contraception. The ethicists agreed that the real problem for our society is to change social

conditions which lead to abortion. They further agreed on the rights of the fetus, but not to the point at which these rights may be overridden.

16. Milhaven, John G., "Abortion Debate: Epistemological Interpretation", *Theological Studies,* 31 (1970) 106-124. The modern mind sees man and his life by focusing on: 1) what is revealed by experience in this world; 2) as the experience would be even if there were no God; 3) as it is shaped, or can be, by technology; 4) as it occurs in the lives of ordinary men; 5) as it is created by the unique self of man, by his freedom that is an "I" in interaction with a "Thou". These principles have brought a shift in moral sensitivity: toward torture, war, free speech, race prejudice, the rehabilitation of the deaf, blind, alcoholics, et. al. The modern emphasis on subjectivity and consciousness clashes with an older model of humanity as something objective, given, "out there".

17. Noonan, John T., Jr., "Abortion and the Catholic Church: a Summary History", *Natural Law Forum,* 13 (1968), 85-131. Line-drawing is the ordinary business of moralists and law-makers. It says that up to a certain point such-and such a value will be preserved but that after that point another value will have play. Line-drawing brings charges of inconsistency of principle only from a critic who believes that one value should not have any limits. The proper criticism of line-drawing, however, is not that it is inconsistent, but that the line is drawn at the wrong place. The Catholic position has always been: a refusal to discriminate among human beings because of their potentialities. In Catholic morality innocent life is not taken as an absolute, but in making judgments affecting life the fetus has always been given a value more than that of zero and a value independent of its parents.

18. Noonan, John T., Jr., "Deciding Who is Human", *Natural Law Forum,* 13 (1968), 134-40. Whoever is conceived of human parents is human. This is because of the presence in the embryo and in the adult of similar characteristics (genetic code, potential for reason, etc.) The argument is based on probabilities (the chance of full human life for a sperm cell is one in 200 million, in a fertilized zygote it is four in five), and on a critique of alternate definitions all of which lead to unacceptable social and political consequences.

19. Novak, Michael, "Abortion is Not Enough", *Christian Century,* 84 (1967), 430-31. The life of the fetus is not the only primary ethical value. But a merely technical medical procedure to eliminate the fetus does not really touch the heart of the problem. Abortion arises because of the

social, economic, and psychological structure of our society. It is typically American to approach complex social problems with a simple technological solution. There are many ways to care for mothers and for unwanted children, without destroying either.

20. O'Connor, John, "On Humanity and Abortion", *Natural Law Forum* 13 (1968), 127-33. (Reprinted in *The Catholic Mind* 67 (1969) 59-64). A critique of Noonan (Cf. entry Nos. 17 & 18). Noonan assumes that the criterion of humanity must be discovered. Rather, we must *decide* what the criterion is to be. The psychological features of human beings, those that relate to value judgments, must be considered: e.g., a 7-month fetus is usually considered human because people can respond to it with love; a 2-month fetus is not a possible object for parental love. To be effective a criterion must be based on what humans take themselves to be. It is based on what the ones deciding consider enough like them to count as human.

21. Ramsey, Paul, "Feticide-Infanticide Upon Request", *Religion in Life*, 39 (1970), 170-186. Our moral judgments must be consistent. If an electroencephalogram is used to decide the absence of human life, it should be used to decide its presence: an 8-weeks old fetus has an EEG.

22. Ramsey, Paul, "The Morality of Abortion", in: Edward Shils, ed., *Life or Death: Ethics and Options* (Seattle, 1968. University of Washington Press.), pp. 60-93. All theories as to the moment when life becomes human are somewhat irrelevant from the religious viewpoint. The moment *when* is important if the sanctity of life is inherent in man; but for the Christian man is *surrounded* by sanctity; his value is the value God has put upon him. That is why in our tradition the fetus was surrounded with protection.

23. St. John-Stevas, Norman, "Law and Moral Consensus," in: Shils, ed., *Life or Death: Ethics and Options.* (Seattle, 1968. University of Washington Press.) The law preserves as well as reflects a moral consensus. One concept presumed by every branch of law and reflected directly in criminal law is the right to life. Anglo-American law extends its protection to human life from the moment of conception and will only withdraw the protection when that life threatens another. Only the Christian doctrine of man can effectively moderate the tyranny of scientific techniques.

24. Schwartz, Herman, "The Parent or the Fetus?" *The Humanist*, 27 (1967), 123-26, 137-38. A plea for liberalized abortion for the good of the mother and family. Only conscious life is human life.

25. Shils, Edward, "The Sanctity of Life", in *Life or Death: Ethics and Options* (Seattle, 1968, University of Washington Press.), pp. 2-38. A fetus does not qualify for the sanctity which is attributed to life. It is still organically part of the mother, has not begun to learn from its own experience and from symbolic communication from others; it has not started on the path to individuality.

26. S., J. T., "In Defense of the Right to Live: the Constitutionality of Therapeutic Abortion", *Georgia Law Review.* 1 (1967), 693-706. Abortion to prevent defects assumes that life is meaningless unless there is a certain degree of physical or mental well-being. It gives others the decision as to whether one should live. Legal remedies against abortion can be brought under the unalienable Constitutional right to life. Moreover, under the Civil Rights Act, section 242, the U.S. Attorney General can bring suit against individuals who conspire to deprive the unborn child of its rights.

27. Tietz, Christopher, "Abortion in Europe", *American Journal of Public Health,* 57 (1967), 1923-32. The purpose of the laws in Scandinavia was to reduce the number of illegal abortions and reduce the total numbers of abortions. The second goal has not been achieved and it is doubtful if the first one has. In Eastern Europe, on the other hand, where the laws are much more permissive, the number of illegal abortions has been dramatically reduced.

28. Visscher, Robert D., "Therapeutic Abortion: Blessing or Murder?" *Christianity Today,* 12 (1968, 6-9.) There is a medical, legal and theological tradition for distinguishing between the viable and non-viable fetus.

29. Williams, George H., "Religious Residues and Presuppositions in the American Debate on Abortion," *Theological Studies,* 31 (1970, 10-75). The movement to redress social wrongs done to women has influenced contemporary Protestant thinking on abortion. The Catholic position should not be labelled "sectarian" since it represents two millenia of Christian and humane reflection and tradition. Proposal: A condominium between parents and the State without allowing either to have absolute power to abort for eugenic or demographic reasons. Politics must find the most humane compromise between the rights of the unborn, the demands of the common good and the autonomy of the individual conscience. Some reasonable grounds for abortion are felonious intercourse, a defective fetus, statutory rape, adulterous pregnancies.

APPENDIX

Since this review of recent literature was made three major books have appeared:

Callahan, Daniel J., *Abortion: Law, Choice and Morality.* New York, 1970. Macmillan.

Hall, Robert E., ed., *Abortion in a Changing World.* 2 Vols. New York, 1970. Columbia University Press.

Noonan, John T., Jr., ed., *The Morality of Abortion: Legal and Historical Perspectives.* Cambridge, 1970. Harvard University Press.

Hall's book consists of papers and discussions from a symposium representing all points of view. The papers are uneven in quality. The prevailing tone is more one of debate than of dialogue, with misstatements of fact, questionable statistics, and superficial understanding of problems and positions.

Noonan's book is scholarly, balanced, and conservative. His survey of the Western religious and philosophical tradition is profound and penetrating. Unlike many moral theologians he transposes the idioms of the past into terms that make sense to contemporary modes of thought. James Gustafson's chapter, "A Protestant Ethical Approach", is a masterly example of a nuanced and situational ethics of responsibility. The final chapter on the legal aspects by Louisell and Noonan is especially good.

Callahan's book is the best of the three. He examines the medical, legal and sociological indications for and against abortion and concludes that the empirical data are not decisive: value judgments are inevitably invoked in interpreting them. There is a comprehensive review of the experience with permissive laws in other countries. The question, "When does human life begin?" is examined from all aspects, genetic, philosophical, religious, anthropological, psychological. The answers to this question fall into three classes: genetic, developmental (or morphological) and social. In a final chapter he proposes as the best political solution one close to that adopted by Japan and the East European countries.

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